

number of plants, wherein the pollen is in form of dust, flower before coming into leaf. Were these plants to begin to blossom after the complete development of their extensive foliage the wind transport of the pollen would be rendered almost impossible. The pollen would be inevitably deposited upon these obstacles and stranded.

Regarding the stigmas, we find that in plants with dusty pollen they are invariably fashioned so as to catch the dust. In one case they are fleshy and swollen and have the surfaces which are exposed to the wind covered with a velvety coating; in another they are in the form of tufts of long papillose or capillary filaments. At the time when pollination takes place they are always fully exposed to the wind, and so placed that when the pollen cells are blown against them they are caught like midges in a spider's web. Yet, in spite of all these contrivances, it would remain very doubtful whether the stigmas would be dusted with pollen through the action of wind were it not for the concurrence of another circumstance. Supposing that only two thousand pollen cells are produced in an inflorescence, it would be only by a lucky chance that a single one of these cells would be caught by the stigmas of a plant at the distance of a few feet, but the number of cells constituting the pollen dust amounts to millions.

In years peculiarly favourable to the flowering of conifers, vast clouds of pollen are borne on gentle winds, and in the event of a thunderstorm pollen may be washed off the plants and run together by the water on the soil, leaving behind patches of a yellow powder, a phenomenon which has given cause for the statement that a fall of sulphurous rain has taken place.

ON THREE APPARENTLY UNDESCRIBED SPECIES OF AUSTRALIAN BIRDS.

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RHIPIDURA INTERMEDIA, sp. nov.

Adult male.—Like the adult male of *Rhipidura rufifrons*, Lath., but distinguished from that species by the less extent of orange-rufous on the basal half of the tail feathers, the terminal half being blackish-brown, and distinctly tipped with white: by the narrower black band on the lower throat, the less scale-like appearance of the feathers on the fore-neck, and the centre of the breast and abdomen being white, the latter washed on the sides with pale fawn-buff; sides of the breast ashy brown; under tail coverts pale fawn colour. Total length, 5.9 inches; wing, 2.9; tail, 3.3; bill, 0.32; tarsus, 0.7.

Hab.—Scrubs of the Bellenden-Ker and Seaview Ranges, North-Eastern Queensland.

Type.—In the Australian Museum.

Dr. Sharpe's description of *Rhipidura rufifrons* in the "Catalogue of Birds in the British Museum," vol. iv., p. 319 (1879), evidently applies to this species, for he describes the tail feathers as being "distinctly tipped with white." The type of *Rhipidura rufifrons* characterized by Dr. Latham, was obtained in New South Wales, and has the tips of the tail feathers pale brown, not white. In the latter respect *Rhipidura intermedia* agrees with *R. torrida*, described and figured (Proc. Zool. Soc., 1865, p. 477, pl. xxviii.) by Dr. Alfred Russel Wallace, from the island of Ternate, but *R. torrida* differs from *R. intermedia* in having the ear-coverts and upper breast black.

The eggs of *R. intermedia* are indistinguishable from those of its ally, *R. rufifrons*, being oval in form, of a pale cream ground colour, and slightly darker at the larger end, where they are dotted and spotted with dull umber-brown, intermingled with a few underlying spots of faint bluish-grey. A set of two measure:—length (A), 0.69 x 0.52 inches; (B), 0.68 x 0.49 inches.

CALAMANTHUS ALBILORIS, sp. nov.

Adult female.—Like the adult female of *Calamanthus fuliginosus*, Vigors and Horsfield, but distinguished from that species by having a large triangular-shaped white patch in front of the eye, joining the white eyebrow above, and extending in a broad line of white feathers below the eye. Total length, 5.2 inches; wing, 2.15; tail, 2; bill, 0.5; tarsus, 0.9.

Hab.—Victoria.

Type.—In the Australian Museum.

The specimen of *Calamanthus*, in which the above distinguishing characters have been pointed out, forms part of the Old Collection of the Australian Museum, and nothing is known of its history beyond that given on the label—"Calamanthus fuliginosus, Victoria, 1865." Formerly I regarded the species of Reed-Lark found by me breeding near Melbourne as *C. campestris* (Nests and Eggs Aust. Birds, p., 148, 1889); but, from the situations it frequented, I have no doubt now it was *C. fuliginosus*, or, perhaps, the present species, *C. albiloris*. All the eggs I took were, however, distinctly smaller than those of *C. fuliginosus* obtained in Tasmania, and agreed precisely in size and their average paler colour with the eggs of *Calamanthus campestris* taken in South Australia. Dr. Sharpe, in the "Catalogue of Birds in the British Museum," vol. vii., p. 502-3 (1883), includes Victoria in the habitat of *C. campestris*, but omits that State from the habitat of *C. fuliginosus*. The latter is clearly an oversight, for in the list of specimens enumerated by him is one from Melbourne. I have never handled or seen a properly localized specimen of *C. campestris* from any part of Victoria.

[Since the above was sent to press Mr. Keartland has forwarded me a specimen of an adult female obtained by him at Clayton,

Victoria. It belongs to the present species, *Calamanthus albiloris*, but the loreal patch, eye-brow, and line of feathers below the eye are not so well defined as in the type, and are of a dull white.]

AMYTIS MODESTA, sp. nov.

Amytis textilis (nec Quoy and Gaim.), Gould, Birds Aust., fol., vol. iii., pl. 28 (1848).

Amytis textilis, North, Rep. Horn. Sci. Exped.—Zool., p. 79 (1896), part.

Adult male.—Like the adult male of *A. textilis*, Quoy and Gaimard, but distinguished from that species in having the head and upper parts of a much paler brown, the line extending from the nostril above the anterior portion of the eye of a very pale rust-red, the throat whitish; remainder of the under surface pale isabelline, becoming slightly darker on the sides of the neck and breast, the former indistinctly streaked with white; sides of the abdomen, flanks, thighs, and under tail coverts pale isabelline-brown. The bill, too, is deeper in shape and not so pointed at the tip as in that of *A. textilis*. Total length, 6.5 inches; wing, 2.55; tail, 3.2; bill 0.42, depth at nostril 0.22, breadth at nostril 0.2; tarsus, 0.95.

Hab.—Central Australia, South Australia, New South Wales.

Type.—In the Australian Museum.

Mr. Keartland has always contended that some of the birds brought back by the Horn Scientific Expedition from Central Australia, and regarded by me as the immature female of *Amytis textilis*, belonged to a distinct species. In support of his opinion he has since sent me several skins, and among them the adult male described above, which was obtained near Meerenie Bluff, Central Australia. This specimen agrees fairly well with Gould's figures of *Amytis textilis*, except that it has not any rust-red patch on each side of the breast, but this is apparent in a female shot at the nest. Others obtained in South Australia and Western New South Wales show more or less indication of this rust-red patch, the throat also being very pale isabelline, and which, together with the upper breast, is more distinctly streaked with white. None, however, approach any way near in depth of colour to what I regard as the true *Amytis textilis* of Quoy and Gaimard. These authors, in the Atlas of the "Voyage of the *Uranie*," also Lesson in his "Traité d'Ornithologie," represent *A. textilis* with the under as well as the upper surface distinctly streaked with white, while Gould figures the birds he procured on the plains bordering the Lower Namoi River in New South Wales with the under parts like those I propose to distinguish under the name of *Amytis modesta*. Eggs of the latter species received from Mr. Keartland are not to be distinguished from those of *A. textilis*, previously described by me in the Zoology of the Horn Expedition. A set of two taken by Mr. C. E. Cowle near Illamurta, Central Australia, are oval in form and of a reddish

white ground colour, which is freckled and spotted with rich reddish-brown, more abundantly on the thicker end:—length (A), 0.8 x 0.77 inches; (B), 0.8 x 0.77 inches.

NEW DISTRICTS FOR VICTORIAN PLANTS.

THE following plants, from various localities, have been identified by Mr. J. G. Luehmann, F.L.S., Government Botanist, and are now recorded as new for the respective botanical regions of Victoria, while *Schoenus sculptus* is new for Victoria. Specimens of each were exhibited at the October meeting of the Field Naturalists' Club:—

PITTOSPOREÆ—

Billardiera cymosa, F. v. M. ... — S.W. — — —
(Victoria Ranges, 1,500 ft., Nov., 1901.)

SALSOLACFÆ—

Kochia brevifolia, R. Br. ... — — S. — —
(Geelong, January, 1896.)

MYRTACEÆ—

Eucalyptus dives, Schauer ... — S.W. — — —
(Grampians, December, 1901.)

COMPOSITÆ—

Calotis anthemoides, F. v. M. ... — S.W. — — —
(Dunkeld, November, 1901.)

Helichrysum rutidolepis, D. C. ... — — — N.E. —
(Murray River, near Rutherglen, Dec., 1901.)

Calocephalus citreus, Lessing ... — — — N.E. —
(Near Rutherglen, December, 1901.)

CYPERACEÆ—

Cyperus tenellus, Linn. ... — S.W. — — —
(Hawkesdale, November, 1901.)

Chorizandra cymbaria, R. Br. ... — S.W. — — —
(Hawkesdale, November, 1901.)

Schoenus sculptus, Boeckeler ... — — — N.E. —
(Unrecorded for Victoria. Near Euroa, December, 1901.)

Lepidosperma elatius, Labill. ... — S.W. — — —
(Hawkesdale, November, 1901.)

GRAMINEÆ—

Poa lepida, F. v. M. ... — S.W. — — —
(Port Fairy, November, 1901.)

Festuca Hookeriana, F. v. M. ... — S.W. — — —
(Hawkesdale, December, 1901.)

INTRODUCED PLANTS CONSIDERED NATURALIZED.

Bellis perennis, Linn. Portland, 1894, and November, 1901.

Soliva sessilis, Ruiz and Pav. Hawkesdale, 1893. (Unrecorded for Australia.) H. B. WILLIAMSON, Hawkesdale.